

voted to the climatology of the United States for the month, and in addition thereto such other matter from the Forecast Division, the River and Flood Service, and the associated bureaus as the Chief of Bureau may direct. Division editors and section directors will be expected to incorporate in their monthly reports notes regarding matters of importance pertaining to irrigation, forestry, engineering, agriculture, transportation, and related subjects. A plan of cooperation between officials of the associated bureaus and the Weather Bureau is contemplated whereby such information will be collected for the Review.

5. Each section director will prepare monthly the following data:

- (a) The matter appearing on the page of the monthly section reports as now published headed,
Climatological data for.....
- (b) That appearing on the page headed,
Daily precipitation for.....
- (c) The daily maximum and minimum temperatures for not more than ten selected stations in his State, the number depending upon the relation the State bears to the climatological district, or districts, to which it belongs.
- (d) A brief general summary giving the most important facts concerning the weather for the month in the State.

6. The data for that portion of a State lying within any one of the twelve climatological districts will be forwarded to the division editor for that district, together with a copy of the State summary for the use of the editor in preparing a general summary for the district. It will be the duty of the division editors to prepare the data for their districts in form for publication and transmit them to the Climatological Division of the Central Office to be finally revised and printed. From the summaries and notes sent to them by the various section directors the division editors will be expected to prepare papers of scientific value and of practical interest to the public.

7. The correspondence necessary in the carrying out of the foregoing instructions is hereby authorized.

8. Hereafter the National Weather Bulletin will be issued monthly instead of weekly. The publication of the bulletins heretofore issued weekly at the section centers during the crop growing seasons, except for Iowa, Hawaii, and Porto Rico, will not be resumed.

Existing instructions that conflict with the foregoing are hereby revoked.

(Signed)

WILLIS L. MOORE,
Chief U. S. Weather Bureau.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —

American society civil engineers. Proceedings. New York. v. 35. March, 1909.

Grunsky, C. E. The sewer system of San Francisco, and a solution of the storm-water flow problem. p. 170-260.

Electrical world. New York. v. 53. 1909.

Lightning arresters for alternating current work. p. 698-699. (Mar. 18.)

Poppe, T. W. Storm and lightning protection to line wires. p. 797-798. (Apr. 1.)

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- Geographical journal. London. v. 33. March, 1909.*
Bowman, Isaiah. Man and climatic change in South America. p. 267-278.
- Oldham, R. D. Recent earthquakes. p. 294-297.
- Williams, George Bransby. The geographical distribution of the mean annual rainfall of Wales and Monmouthshire. p. 297-310.
- Imperial earthquake investigation committee. Bulletin. Tokyo. v. 2. no. 3.*
- Omori, F. Note on the long-period variations of the atmospheric pressure. p. 215-222.
- Omori, F. Experiments on the vibration of brick columns. p. 223-228.
- Nature. London. v. 80. 1909.*
- Eve, A. S. Ionisation in the atmosphere. p. 36-37. (Mar. 11.) [Experiments showing that the "Ebert" apparatus and others of like type are misleading in indicating a large excess of positive over negative electricity in the atmosphere.]
- Ashworth, J. R. Is there a vertical magnetic force in a cyclone? p. 40. (Mar. 11.)
- Gold, E. The isothermal layer of the atmosphere. p. 68. (Mar. 18.)
- Physical review. Lancaster. v. 28. March, 1909.*
- Harvey, Frederic A. Atmospheric radioactivity in California and Colorado and the range of the α -particles from radium B. p. 188-216.
- Review of reviews. New York. v. 39. April, 1909.*
- Foster, Paul P. Plotting the upper air. p. 453-458. [Illustrated.]
- Royal astronomical society. Journal. Toronto. v. 3. Jan.-Feb., 1909.*
- Young, J. Three exceptional earthquakes recorded at Toronto, Ont., and Victoria, B. C. p. 71-72.
- Royal meteorological society. Quarterly journal. London. v. 35. Jan., 1909.*
- Harries, H. German meteorological society—Twenty-fifth anniversary, 1908. p. 1-6.
- Makower, W., White, M., Marsden, E. Investigation of the electrical state of the upper atmosphere, made at the Howard estate observatory, Glossop. p. 7-12.
- Ley, C. H. Balloon observations at Birdhill, Co. Limerick, during July and August, 1908. p. 15-29.
- Oldham, R. D. Earthquake weather. p. 30. [Extract from Nature.]
- Bruce, Eric Stuart. Some forms of scientific kites. p. 31-35.
- Cave, C. J. P. The registering balloon ascents in the British Isles, July 27-August 1, 1908. p. 37-42.
- Cave, C. J. P. Balloon observations at Ditcham Park near Petersfield, July 27-August 2, 1908. p. 43-50.
- Assmann, Richard. The German aerological expedition for the exploration of the upper air in tropical East Africa, July to December, 1908. p. 51-54.
- The snowfall of December 29, 1908. p. 54.
- Royal society. Proceedings. London. ser. A. v. 82. 1909.*
- Gold, E. The isothermal layer of the atmosphere and atmospheric radiation. p. 43-70.
- Scientific American supplement. New York. v. 47. March 27, 1909.*
- Solar electric phenomena. Their relation to terrestrial magnetic perturbations. p. 207.
- Scottish geographical magazine. Edinburgh. v. 25. March, 1909.*
- Geikie, James. Calabrian earthquakes. p. 113-126.
- The Argentine's Antarctic meteorological station. p. 151.
- Symons's meteorological magazine. London. v. 44. March, 1909.*
- Devereux, H. B. The cyclone and floods of January, 1907, in New Zealand. p. 36-37.
- Terrestrial magnetism and atmospheric electricity. Baltimore. v. 14. Mar., 1909.*
- Moidrey, J. de. L'Observatoire magnétique de Zi-ka-wei. p. 1-2. [Illustrated.]
- Eve, A. S. Some problems in radioactivity. p. 25-36.
- Archives des sciences physiques et naturelles. Genève. Tome 27. 15 fév. 1909.*
- Dufour, Henri. Recherches sur la réflexion de la chaleur solaire à la surface du lac Léman. p. 206-208.
- Ciel et terre. Bruxelles. 29 année. 1909.*
- Boutquin, A. L'Asie centrale. p. 615-625. (Feb. 16.)
- Ciel et terre. Bruxelles. 30 année. 1909.*
- Boutquin, A. L'Asie centrale. p. 1-7; 41-48. (Mar. 1, 16.)
- V., J. Études sur les nuages. p. 33-40. (16 mars.) [Review of paper by Quervain.]
- France. Académie des sciences. Comptes rendus. Paris. Tome 148. 1 mars, 1909.*
- Arctowski, Henryk. Sur les variations de la répartition de la pression atmosphérique à la surface du globe. p. 589-591.
- Teisserenc de Bort, L[eon]. Lois de distribution de la température avec la hauteur aux diverses latitudes, et suivant les régimes météorologiques différents. p. 591-594.
- Revue nécrophologique. Mons. Tome 4. 1909.*
- Deschrevrens, Marc. La température dans l'air, d'après 300 ballons. p. 290-291, 293, 295. (janvier.)
- Deschrevrens, Marc. Remarques à propos des explications données des températures de la haute atmosphère. p. 297, 299, 301. (février.)

- Société belge d'astronomie. Bruxelles. 14 année. 1909.*
- Durand-Gréville, E. L'albe ou le second crépuscule du soir. p. 9-25. (Janvier.)
- Damry, A. Visite des installations du service astronomique de l'Observatoire royale. Physique du globe. Magnétisme terrestre et séismologie. p. 41-58. (février.) [Illustrated.]
- Annalen der Hydrographie und maritimen Meteorologie. Berlin. 37. Jahrgang. März 1909.*
- Deutsche Seewarte. Uebersicht über die in den letzten 30 Jahren bei der Deutschen Seewarte eingelieferten meteorologischen Schiffsstagsbücher. p. 97-100.
- Elgenartige Massenbildung von Wasserhosen an der Küste von Queensland am 3. April 1908 und bei den Admiraliitäts-Inseln im September 1908. p. 100-103.
- Querfurt, Heinrich. Die Einwirkung der Winde auf die Strömungen im Skagerrak und Kattegat mit besonderer Berücksichtigung der am Leuchtschiff "Skagens Riff" angestellten Beobachtungen während der Jahre 1903 bis 1905. p. 107-121.
- Pr., M. Taifun vom 5. bis 6. Oktober 1908 im Südchinesischen Meer. p. 134-137.
- Beiträge zur Geophysik. Leipzig. 9. Bd. 1908.*
- Tams, J. Geographische Verbreitung und erdwissenschaftliche Bedeutung der aus den Erdbebenbeobachtungen des Jahres 1908 sich ergebenden Epizentren. p. 237-377.
- Hoffman, J. F. Grundlinien einer Theorie der Eiszeiten. p. 405-440.
- Davison, Charles. On the British earthquakes of the years 1901-1907. p. 441-504.
- Tams, H. Die mikroseismischen Registrirungen einiger Beben des Jahres 1908. p. 509-546.
- Krebs, Wilhelm. Granulationen der Sonnenoberfläche als Folgerscheinungen wellenartiger Vorgänge in der Erdatmosphäre. p. 547-558.
- Gerland, G. Das seismische Verhalten des Atlantischen und des Pazifischen Ozeans. p. 559-571.
- Eppenstein, O. Das Vertikalseismometer der seismischen Station zu Jena. p. 593-604.
- Deutsche geographische Blätter. Bremen. v. 32. 1909.*
- Nölke, Fr. Die Entstehung der Eiszeiten. p. 1-30.
- Geographische Zeitschrift. Leipzig. 15. Jahrgang. Februar 1909.*
- Sapper, Karl. Erdbeben und Erdoberfläche. p. 65-80.
- Illustrierte aeronautische Mittheilungen. Strassburg. 13. Jahrgang. 10. März 1909.*
- Linke, F. Luftschiffahrt und Wetterdienst. p. 174-176.
- Meteorologische Zeitschrift. Braunschweig. Band 26. Februar 1909.*
- Steen, Aksel S. Einige Studien über die Bewölkung. I. Die Bewölkung und das Tageslicht. p. 49-54.
- Defant, A. C. Alessandri, Messungen der Intensität der Sonnenstrahlung auf dem Monte Rosa. p. 54-60.
- Rheden, J. Wolkenhöhennmessungen mit Hilfe der Scheinwerferanlage des Wiener Leuchtbrunnens im Jahre 1908. p. 60-66.
- Grossmann, —. Dr. Ernest Kohlschütter: Höhenmessungen in Deutsch-Ostafrika. p. 67-74.
- Everdingen, E. van. Ueber die Ermittelung des Winkels zwischen Gradient und Windrichtung. p. 75.
- Schmidt, Wilhelm. Ueber die reflexion der Sonnenstrahlung an Wasserflächen. p. 80-81.
- Ihne, E. Ueber praktische Anwendung von phänologischen Karten. p. 81.
- Hann, J[ulius]. Zum Klima von Palästina. Meteorologische Beobachtungen zu Athroun (Latrun) 1901 bis 1906. p. 82-83.
- Knoche, W. Eine Beobachtungen des Leuchtens über den Anden zu Valparaiso. p. 83-84.
- Reisner, Heinrich. Zur mechanischen Energie der Niederschläge. p. 85-87.
- Wagner, A. Die höchsten Registrierballonaufstiege. p. 88-90.
- Polis, P[eter]. Feuchtigkeitsmessungen auf dem Atlantischen Ozean. p. 90-91.
- Petermanns Mitteilungen. Gotha. 54. Bd. Dez., 1908.
- Hess, H. Ueber die Meteorologie der höhern Luftsichten. p. 233-284.
- Langenbeck, R. Büsserschnee in den Walliser Alpen. p. 285-286.
- Woikow, A. Bogoljepow, M.: Klimaschwankungen im europäischen Russland in der historischen Zeit. p. 232-239. [Abstract of work in Russian by Bogoljepow.]
- Petermanns Mitteilungen. Gotha. 55. Band. 1909.
- Matzat, H. Regenmessungen aus Kamerun. p. 20-21. (Januar.)
- Berson, A. Aerologische Forschungsreise nach Ostafrika. p. 46-47. (Februar.)
- Physikalische Zeitschrift. Leipzig. 10. Jahrgang. 1909.*
- Daunderer, A. Ueber die in den unteren Schichten der atmosphäre vorhandene elektrische Raumladung. p. 113-118. (15. Feb.)
- Wulf, Th. Ueber die in der Atmosphäre vorhandene Strahlung von hoher Durchdringungsfähigkeit. p. 152-156. (1. März.)
- Costanzo, G. Elektrische Zerstreuung in der atmosphärischen Luft auf dem Mitteländischen Meere. p. 197-199. (15. März.)
- Kaiserl. Akademie der Wissenschaften. Sitzungsberichte. Mathematisch-naturwissenschaftliche Klasse. Wien. 116. Band. 1907.
- Hopfner, Friedrich. Untersuchung über die Bestrahlung der Erde durch die Sonne mit Berücksichtigung der Absorption der Wärmestrahlung durch die atmosphärische Luft nach dem Lambert'schen Gesetze. p. 167-234. (Februar.)
- Kromar, J. & Schneider, R. Absolute Messungen der nächtlichen Ausstrahlung in Wien. p. 571-600. (März.)
- Obermayer, Albert von. Gewitterbeobachtungen und Gewitterhäufigkeit an einigen meteorologischen Beobachtungsstationen der Alpen, insbesondere an Gipfelstationen. p. 723-758. (April.)
- Exner, Felix M. Grundzüge einer Theorie der synoptischen Luftdruckveränderungen. II. Mittellung. p. 819-854. (April.)
- Defant, Albert. Ueber die Beziehung zwischen Druck und Temperatur bei mit der Höhe variablen Temperaturgradienten. p. 1181-1198. (Oktober.)
- Wetter. Berlin. 26. Jahrgang. Februar 1909.
- Assmann, Richard. Professor Dr. Adolf Sprung. p. 25-27.
- Peppler, W. Luftdruckstudien. p. 27-32.
- Robitsch, M. Zusammenhang zwischen Blitz und Regenintensität. p. 43-44.
- Schmid, —. Ueber Böen. p. 44-45.
- Liese, C. Die Wetterdienst-Nebenstelle Kassel und ihre Erfolge im Dienstjahre Mai bis Oktober 1908. p. 45-48.
- Reale accademia dei Lincei. Atti. Roma. v. 18. 17 gennaio 1909.
- Amaduzzi, Lavoro. Pressione e conducibilità elettrica dell'atmosfera. p. 55-58.
- Società aeronautica Italiana. Bollettino. Roma. Anno 6. Gennaio 1909.
- Pacini, D. Misura di ionizzazione dell'aria su terreferma ed in mare. p. 40-41.
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- RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.
- C. FITZHUGH TALMAN, Librarian.
- The following have been selected from among the titles of books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be lent for a limited time to officials and employees who make application for them. Anonymous publications are indicated by a —.
- Aachen. Meteorologisches Observatorium. Deutsches meteorologisches Jahrbuch. 1907. Aachen. Jahrg. 13. Karlsruhe. 1909. 61 p. f°.
- Arctowski, H[enryk]. ... Les variations séculaires du climat de Varsovie. (Zmiany wiekowe klimatu Warszawy.) Warszawa. 1908. 24 p. 4°. (Odbitkaz, Prac matematyczno-fizycznych. T. 19.)
- Ashworth, J. R. An analysis of the meteorological elements of Rochdale. Rochdale. 1908. 18 p. 8°. [Reprinted from the "Transactions of the Rochdale literary and scientific society."]
- Bemmelen, W. van. Magnetic survey of the Dutch East Indies made in the years 1903-1907. Batavia. 1909. 69 p. f°. (Appendix I to "Observations made at the Royal magnetic and meteorological observatory at Batavia. v. 30, 1907.")
- Blanckenhorn, Max. Studien über das Klima des Jordantals. (Sonderabdruck aus der Zeitschrift des Deutschen Palästina-Vereins. p. 38-109.)
- Chile. Servicio meteorológico de la Dirección del territorio marítimo. Anuario... Tome 8, 1906. Valparaíso. 1908. 416 p. 4°.
- Coimbra. Observatorio meteorológico. Observações meteorológicas e magnéticas... 1906. v. 45. Coimbra. 1909. viii, 153 p. f°.
- Same. 1907. v. 46. Coimbra. 1909. viii, 153 p. f°.
- Fortschritte der Physik. 1907. Braunschweig. 1908. lxxiii, 604 p. 8°.
- Geneva. Observatoire. Observations météorologiques faites aux fortifications de Saint-Maurice 1907. Résumé par R. Gautier et H. Dualme. Genève. 1908. 55 p. 8°.
- Résumé météorologique de l'année 1907 pour Genève et le Grand Saint-Bernard. Genève. 1908. 101 p. 8°.
- Germany. Deutsche Seewarte. 8. Nachtrag zum Katalog der Bibliothek der Deutschen Seewarte zu Hamburg, 1907 und 1908. Hamburg. 1909. vi, 78 p. 8°.
- Great Britain. Meteorological office. Hourly readings obtained from the self-recording instruments at four observatories in connection with the Meteorological office, 1908. London, 1909. xiv, 197 p. f°.
- Great Britain. Solar physics committee. A discussion of Australian meteorology. London. 1909. vii, 117 p. f°.